THAT WHICH IS CLAIMED:

1. A method of preparing an activated polyethylene glycol (aPEG) solution that is stabile and substantially free of contaminants comprising:

(a) dissolving aPEG in a solvent in which said aPEG is stabile; and,

(b) filtering said dissolved aPEG through a filtration means which substantially reduces the levels of contaminants in the resulting filtered aPEG solution, wherein contaminants are reduced by 90% or more.

2. The method of claim 1, wherein the aPEG is polyoxyethylene (α-carboxymethyl, ω-carboxymethoxypolyoxyethylene) (POE).

3. The method of claim 2, wherein the solvent is selected from the group consisting of ethanol, methanol, acetonitrile, dimethylsulfoxide, and tetrahydrofuran.

4. The method of claim 3, wherein the filtration means substantially reduces bioburden contaminant levels in the filtered aPEG solution.

5. The method of claim 4, wherein the filtration means reduces bioburden contaminant levels in the filtered aPEG solution to less than 1 CFU/ml.

6. The method of claim 5, wherein the filtration means comprises a 0.2 micron micron Nylon 66 Posidyne filter.

7. The method of claim 4, wherein the filtration means substantially reduces endotoxin contaminant levels in the filtered aPEG solution.

8. The method of claim 7, wherein the filtration means reduces endotoxin contaminant levels in the filtered aPEG solution by at least 500 EU/cm^2 of filter area.

9. The method of claim 8, wherein the filtration means comprises a positively charged membrane.

10. The method of claim 8, wherein the filtration means comprises a positively charged resin.

11. The method of claim 8, wherein the filtration means comprises a 0.2 micron Nylon 66 Posidyne filter.

12. A method of preparing a chemically modified hemoglobin solution that is substantially free of contaminants comprising:

(a) dissolving an aPEG in a solvent suitable for addition to a hemoglobin solution and in which said aPEG is stabile;

(b) filtering said dissolved aPEG through a filtration means which substantially reduces the levels of contaminants in the resulting filtered aPEG solution; and,

(c) combining said resulting filtered aPEG solution with a hemoglobin solution in a combining means.

13. The method of claim 12, wherein the aPEG is POE.

14. The method of claim 13, wherein the solvent is selected from the group consisting of ethanol, methanol, and acetonitrile.

15. The method of claim 14, wherein the filtration means substantially reduces endotoxin contaminant levels in the filtered aPEG solution.

16. The method of claim 15, wherein the filtration means reduces endotoxin contaminant levels in the filtered aPEG solution by at least 500 EU/cm^2 of filter area.

17. The method of claim 16, wherein the filtration means comprises a 0.2 micron micron Nylon 66 Posidyne filter.

18. The method of claim 17, wherein the hemoglobin solution comprises pyridoxylated stroma-free hemoglobin.

19. The method of claim 18, wherein the filtration means and combining means are aseptically joined.